

# **SEA LIFE Sydney Aquarium**

## **Penguin Expedition Self-Guided Resource Kit**

**Primary K- 3**



## Introduction

The following material has been developed by the SEA LIFE Sydney Aquarium Education **Team to support our new Penguin Expedition. This resource kit is so that teachers can** integrate the Penguin Expedition excursion into their Antarctica Unit of Work.

This resource provides an overview of the content of the experience and how teachers may use it for their classes, prior to a visit.

This guide provides information for teachers and activities for students around different key learning areas. Within this section there are sheets for students to use as conversation starters and areas of inquiry, plus additional material for classroom activities.

For more information about Penguin Expedition please visit our website [www.sealifesydney.com.au](http://www.sealifesydney.com.au)



## The Expedition Ride

### Background Information

Be the first school to experience Penguin Expedition at SEA LIFE Sydney Aquarium! This world-first ride-through penguin experience transports explorers on a sensory journey through the sub-Antarctic to meet spectacular King and Gentoo penguins. This new amazing discovery aims to educate students on conservation threats facing the penguins' habitat on Macquarie Island. Penguin Expedition highlights the impacts of plastic pollution and habitat destruction affecting these majestic birds.

Penguin Expedition has been designed to replicate Macquarie Island which is a part of the sub-Antarctic group of islands. There are over 26 island groups in the sub-Antarctic region, most uninhabited even by researchers. Many have unique ecologies and a wealth of wildlife. Macquarie Island, described by Sir Douglas Mawson in 1919 as 'one of the wonder spots of the world', is the only place on earth where mid-oceanic crustal rocks, all formed on or below the sea-bed, are exposed on the surface. In geological terms this happened very recently, less than 700,000 years ago. It is primarily for these geological reasons that the island was declared a World Heritage Area in 1997. It has been SEA LIFE Sydney Aquarium's goal to highlight the beauty of this island and showcase the amazing penguin species King and Gentoo Penguins that call Macquarie Island home. This one-of-a-kind experience will allow you and your students to discover a unique part of the world that so many of us will not get to see in real life.

### What to See

- King and Gentoo Penguin colonies
- Snow, snow flurries and cold temperatures
- Mawson's Hut
- Teachers and students can board a boat ride around the island for a closer viewing experience or instead can go to the viewing platform.
- Plastic pollution impacts on this region
- Introduced pests threatening the region

Penguin Expedition provides a unique opportunity to engage and inspire students in the world of learning. This resource kit covers elements of the natural and physical sciences, social sciences, history and humanities; SEA LIFE Sydney Aquarium is an ideal setting for



cross curriculum studies.

## **Talk Times**

Antarctic Penguin Talk & Feed at 11: 30am and 3pm daily  
(Please note that these times are subject to change)

## **How to Book**

For information on how to book your school excursion or you would like to know more about Penguin Expedition, visit [www.sealifesydney.com.au](http://www.sealifesydney.com.au) or phone 1800 199 657 to speak to one of our Education Call Centre booking agents.





## Self-Guided Topics

The following is a list of Educational Programs for self-guided excursions that teachers can select to choose while visiting Penguin Expedition at SEA LIFE Sydney Aquarium.

Topic	Stage
Antarctic Penguins	Stage 1
How Cold is Cold?	Stage 2
Antarctic Animals	Stage 3
Life in Antarctica	Stage 3
Macquarie Island	Stage 4

Please note that whilst the suggested year level is indicated for the themes above, teachers are encouraged to look at, and adapt, resources from other year levels.



## Antarctic Penguins

### Activity Sequence

Use these learning activities to explore the magical world of penguins. Students will learn about key features penguins need to survive in their environment. Students will learn about some of the threats facing King and Gentoo Penguins and the role SEA LIFE Sydney Aquarium plays in breeding and protecting these majestic birds.

#### 1. Did you know?

As a whole group, teacher reads to students *My First Book About Penguins* by Molly Davidson and John Davidson. Students take turns reading different facts about the different types of penguin species. In particular make sure to focus on King and Gentoo Penguins.

As a class discuss the following questions:

- What type of animal are penguins?
- What clues help us to identify that penguins are birds?
- Where do penguins live?
- How do penguins look after their babies?
- What features do penguins have to help them survive in the ocean?
- What features do penguins have to help them survive on land?
- What are some of the dangerous threats penguins have to face?

#### 2. Penguins Galore!

Bring your students to visit SEA LIFE Sydney Aquarium's new Penguin Expedition and learn about King and Gentoo Penguin colonies. Students can also pretend to be an explorer and get to imagine what it would be like to sail around the sub-Antarctic islands, feel cool temperatures and see snow flurries.

#### 3. Penguin Habitat Time!

Once students have visited SEA LIFE Sydney Aquarium either in small groups or pairs, get students to build a replica of the environment the penguins need in order to survive the sub-Antarctic. Students are encouraged to build their penguin habitat using recycled materials that they have collected from their home.



#### **4. Help the Penguins!**

When visiting SEA LIFE Sydney Aquarium make sure to visit our Conservation Quay and get your students to take a pledge!

Choose from one of our pledges to either use reusable drink bottles, use your own bags when grocery shopping, pick up ten pieces of rubbish a day, don't use straws or only to buy sustainable fish products.

Post your students pledge photo to #SLTPledge. Take this pledge back to your school and get your whole school involved. Monitor your students and schools progress each week and report back to us on your progress! Ask your principal to participate in Plastic Free July and get your school to take the challenge. For more information visit [www.sealifetrust.org.au](http://www.sealifetrust.org.au)



## How Cold is Cold?

### **Activity Sequence**

Use these learning activities to explore climate conditions in locations around the world. Learn about weather and climate, starting with where you live and next comparing the climates of places such as Darwin and sub-Antarctic Macquarie Island. Students will complete experiment to test if they could survive the cold conditions.

#### **1. Holiday Time!**

Engage the students' prior knowledge about weather and climate. Ask students what clothes they would need to pack if they were to go on a holiday. Refer to a world map and choose a holiday destination. See if students know about:

- places that have a tropical climate
- places that are arid
- places that have a temperate climate
- polar climates

After class discussion, students select a place they would like to visit on holidays. On the worksheet provided students draw what they would wear and when they would visit this region.

#### **2. Breaking News: With your local weather report!**

Show your students YouTube clips or record the news' weekly weather reports.

To understand climate data students need to be familiar with maximum, minimum and average temperatures.

Get your students to measure and record weather data at regular intervals during the day over one week period. Measure the air temperature in the shade. Highlight the lowest (minimum) and highest (maximum) daily temperatures.

Relate the temperature to how they feel, for example at 12°C would it feel cold, cool or warm? What is the coldest temperature for the week?

After students have completed this for their local area, get students to go on





[www.bom.gov.au](http://www.bom.gov.au) to find what the temperature is in other cities and record on the worksheet provided.

### **3. How cold is Antarctica?**

Antarctica is cold but how cold would it feel? To get a sense of temperature, bring students to visit the SEA LIFE Sydney Aquarium to experience our Penguin Expedition to experience see what it would be like to live in the sub-Antarctic climate and to investigate what the difference in temperatures would be like compared to the fridge and freezer.

Use *Worksheet 3* at the aquarium and back at school.

Back at school compare student predictions with actual measurements. Generally, refrigerators are set at 3–4 °C, freezers about –18 °C, Penguin exhibit Expedition 6 °C. How cold would it be to live in a place with those temperatures?

Ask students to think about why Penguin Expedition is set at 6 °C and not colder?

Using the internet get students to research the climate and temperatures of Antarctica and put together an information brochure telling people what to pack if they were to go to Antarctica for a holiday. Students should include pictures and a list of suggested items to pack.



## Worksheet 1- Holiday Time!

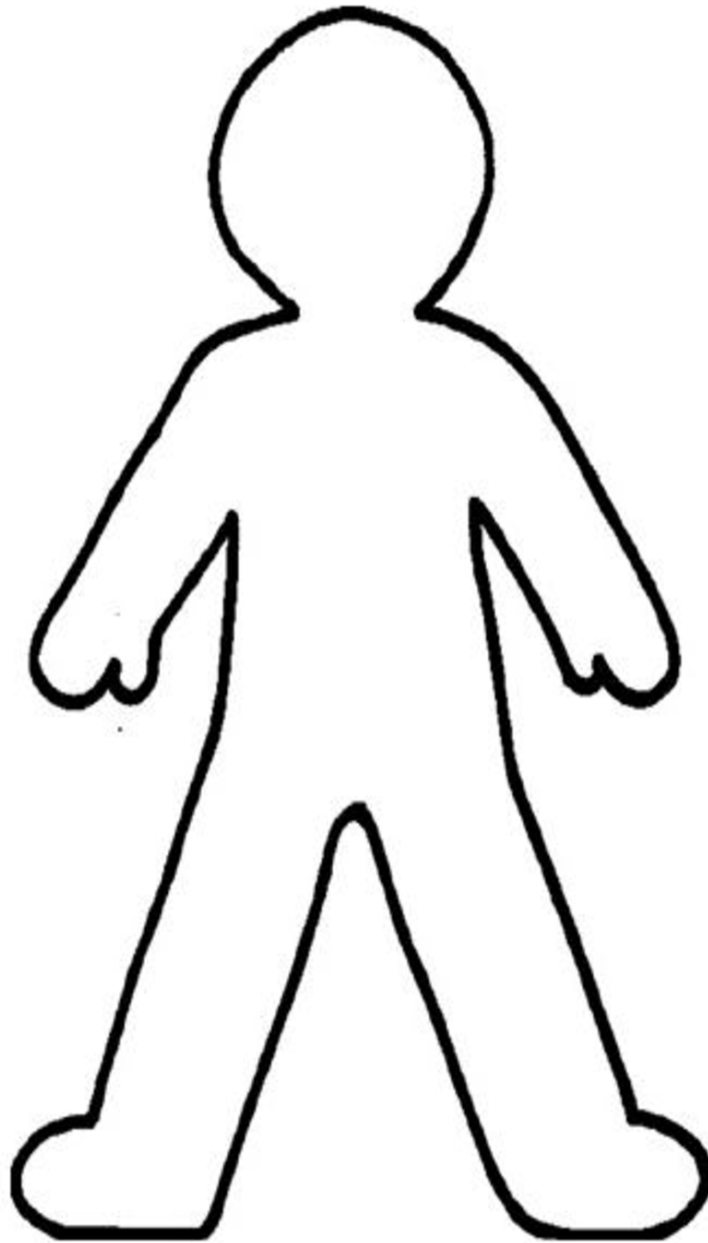
Student Name.....

Date.....

Which country would you like to visit for a holiday? .....

What is the climate like in this country? .....

Draw in the space provided your holiday outfit



## Worksheet 2- Breaking News “Weekly Weather Report”

Student Name.....

Date.....

Go to [www.bom.gov.au](http://www.bom.gov.au) and look up the weekly weather forecast for your area.

In the table below record the following information:

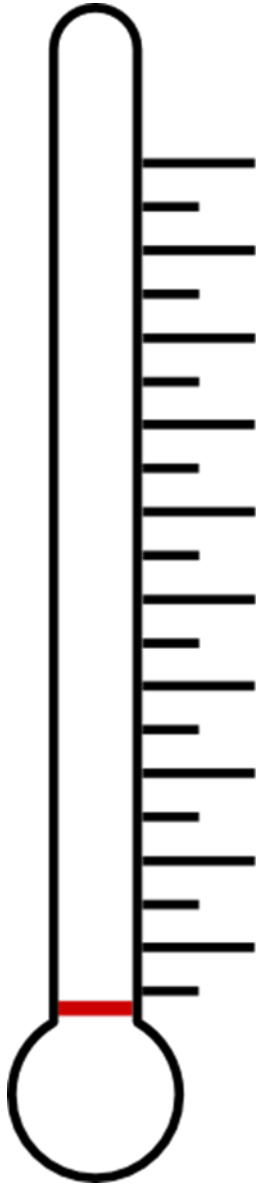
City/Region	Maximum Temperature	Minimum Temperature	Conditions for example sunny, windy etc.
Your suburb/local area			
Sydney			
Darwin			
Noosa			
Hobart			
Melbourne			



## Worksheet 3 - Temperature Predictions

Student Name.....

Date.....



1. On your thermometer draw a scale with the range from  $-20^{\circ}\text{C}$  to  $20^{\circ}\text{C}$ .
2. On the thermometer colour in your predictions.
3. Use the colour blue to show how cold you think the refrigerator is.
4. Use the colour green to show how cold you think the penguin exhibit is.
5. Use the colour red to show how cold you think the freezer is.





Using a thermometer find out and record the actual temperatures in the table below: How do these compare to your predictions?

Place	Actual Temperature Measurement
Refrigerator	
Penguin Expedition	
Freezer	

